

S/N: 10/ 761,613
Docket : CS03-050
Reply to the Office Action dated 03/22/2005

Page 3

1

2

AMENDMENTS TO THE SPECIFICATION

3

4

5 Please replace the paragraph beginning at Page 9, Line 19 with the following rewritten
6 paragraph (showing changes):

7

8 There are many options for the order sequence of the steps for forming
9 the LDD, S/D, Halo, threshold voltage V_t and doped depletion regions. Furthermore, the
10 process can include steps to dope the upper portion of the substrate (e.g., first doped region
11 131), especially in the area between the S/D 150 and doped depleted regions 130. For
12 example, field implants, V_t implants, halo implants can be performed to dope the first
13 doped region 131. The order of these steps is only limited by feasibility.

14

15 Please replace the paragraph beginning at Page 12, Line 4 with the following rewritten
16 paragraph (showing changes):

17

18 Isolation regions 102, as shown in figure 4-3A, can be formed at any
19 point in the process. Isolation regions 102 are preferably shallow trench isolation (STI)
20 regions.

21

22

23 Please replace the paragraph beginning at Page 14, Line 9 with the following rewritten
24 paragraph (showing changes):

25

26 Preferably the doped depletion region has an a second type impurity
27 concentration slightly higher than the total first conductivity type dopants in the substrate
28 between the doped depletion regions 130 and S/D regions 150 or (first impurity doped

S/N: 10/ 761,613
Docket : CS03-050
Reply to the Office Action dated 03/22/2005

Page 4

1 region 131). Preferably the doped depletion regions 130 have an impurity concentration
2 high enough to counter act the opposite impurity concentration in the substrate so that a
3 portion of the lightly doped depletion region 130 has effectively a net impurity
4 concentration between 1E16 and 5E 18 atoms/cc. This portion of the doped depletion
5 region is electrically effectively an insulator (like a dielectric layer).

6

7

8